



training and  
certification



# Thank you for joining!

## AWS Certified Cloud Practitioner Week 2 Content Review

- This session will be recorded
- Please stay on mute
- Submit questions via chat function
- If you have other questions please contact [helcreig@amazon.com](mailto:helcreig@amazon.com)



Partner  
Enablement  
Manager

# AWS Certified Cloud Practitioner

Week 2 Content Review

**Aaron Trockman**

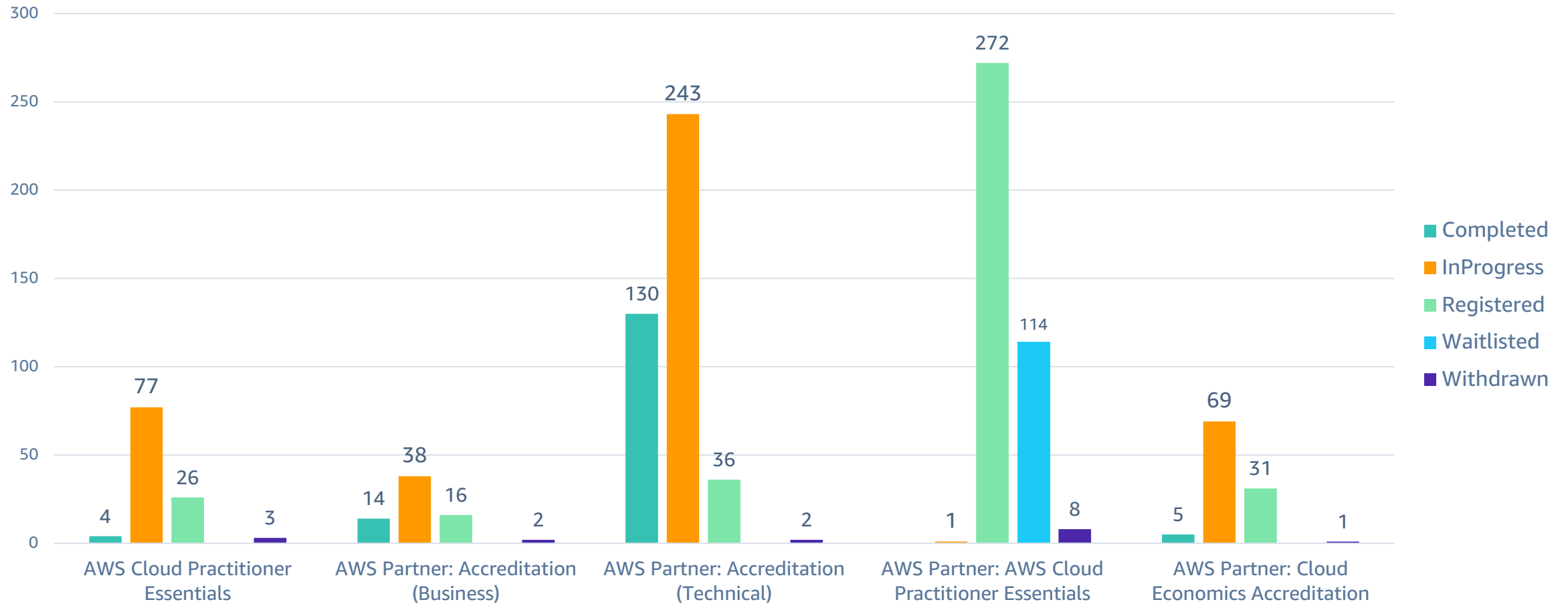
Partner Enablement Manager

Amazon

# Programmatic Updates

# By the Numbers

As of 7/1/22, 6pm IST



# About the Exam

# AWS Certified Cloud Practitioner

## About the Exam

- 90 minutes
- 65 Questions
  - Scored 100 to 1000 (700+ pass)
- Multiple Response & Individual response questions
- In-Person & remote proctoring available



# AWS Certified Cloud Practitioner

## Key Exam Topics

% of Exam	Domain	Focus Areas
26%	Cloud Concepts	Value proposition of the cloud
25%	Security & Compliance	Shared responsibility model, core security services
33%	Technology	AWS global infrastructure, Core AWS services
16%	Billing & Pricing	Pricing/cost analysis tools, service pricing models, billing



# AWS Certified Cloud Practitioner

## Helpful Resources

### Training

- [AWS Partner Accreditation: Business](#)
- [AWS Partner Accreditation: Technical](#)
- [AWS Partner: Cloud Economics Accreditation](#)
- [AWS Partner: AWS Cloud Practitioner Essentials](#)

### White Papers

- [Overview of Amazon Web Services](#)
- [AWS Well-Architected Framework](#)
- [How AWS Pricing Works: AWS Pricing Overview](#)
- [Management and Governance Lens](#)
- [AWS Global Infrastructure](#)
- [Compare AWS Support Plans](#)
- [AWS Acceptable Use Policy](#)
- [Shared Responsibility Model](#)

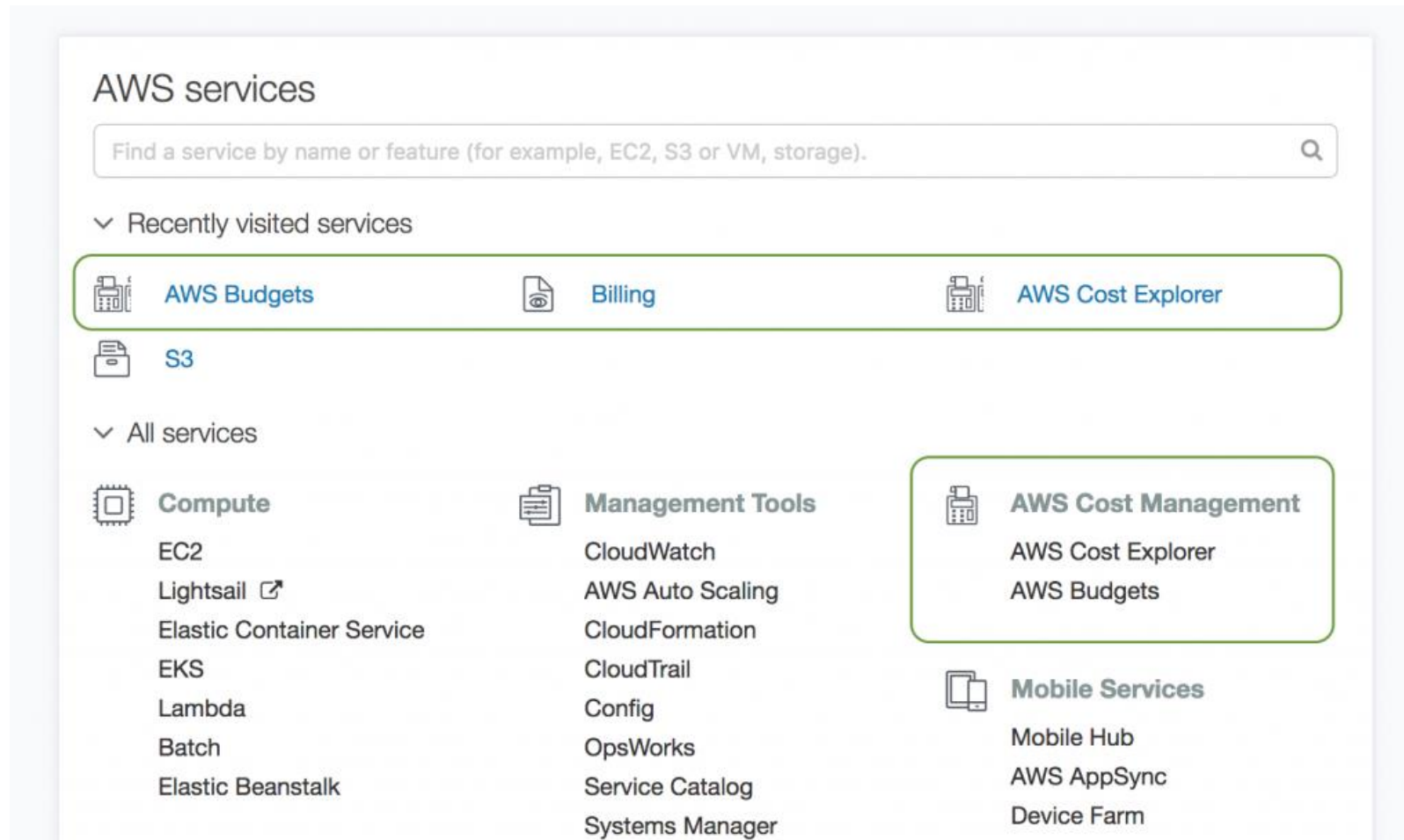
### Exam Preparation

- [Quiz Show 1](#)
- [Quiz Show 2](#)
- [Quiz Show 3](#)
- [Quiz Show 4](#)
- [Sample Questions](#)
- [Schedule an Exam](#)

# Billing & Pricing Services on the Exam

# Available AWS Cost Management Services

Know and understand when to use each of the available AWS services



# AWS Budgets

## Set Custom Budgets and Receive Alerts

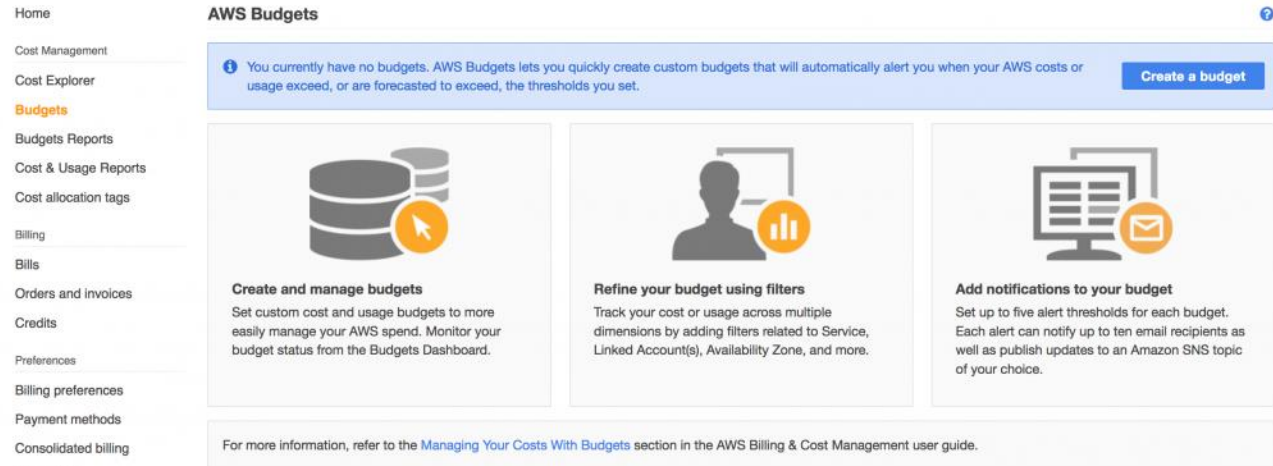
Set custom budgets to track your cost and usage from simple, monthly reminders to customized budgets by service.

### Monitor

Monitor your AWS cost and usage, or RI and Savings Plans' coverage and utilization

### Respond

Set up custom actions, such as Identity and Access Management (IAM) policies, Service Control Policies (SCPs), or target running instances (EC2 or RDS) that can be executed automatically when a budget target has been met or exceeded



The screenshot shows the AWS Budgets console. On the left is a navigation menu with links: Home, Cost Management, Cost Explorer, Budgets (highlighted), Budgets Reports, Cost & Usage Reports, Cost allocation tags, Billing, Bills, Orders and invoices, Credits, Preferences, Billing preferences, Payment methods, Consolidated billing, and Tax settings. The main content area is titled 'AWS Budgets' and features a blue banner stating: 'You currently have no budgets. AWS Budgets lets you quickly create custom budgets that will automatically alert you when your AWS costs or usage exceed, or are forecasted to exceed, the thresholds you set.' with a 'Create a budget' button. Below the banner are three cards: 1. 'Create and manage budgets' with a database icon and text: 'Set custom cost and usage budgets to more easily manage your AWS spend. Monitor your budget status from the Budgets Dashboard.' 2. 'Refine your budget using filters' with a person and bar chart icon and text: 'Track your cost or usage across multiple dimensions by adding filters related to Service, Linked Account(s), Availability Zone, and more.' 3. 'Add notifications to your budget' with a monitor and envelope icon and text: 'Set up to five alert thresholds for each budget. Each alert can notify up to ten email recipients as well as publish updates to an Amazon SNS topic of your choice.' At the bottom, a note says: 'For more information, refer to the [Managing Your Costs With Budgets](#) section in the AWS Billing & Cost Management user guide.'

# AWS Cost Explorer

## Visualize and Explore Your AWS Costs and Usage

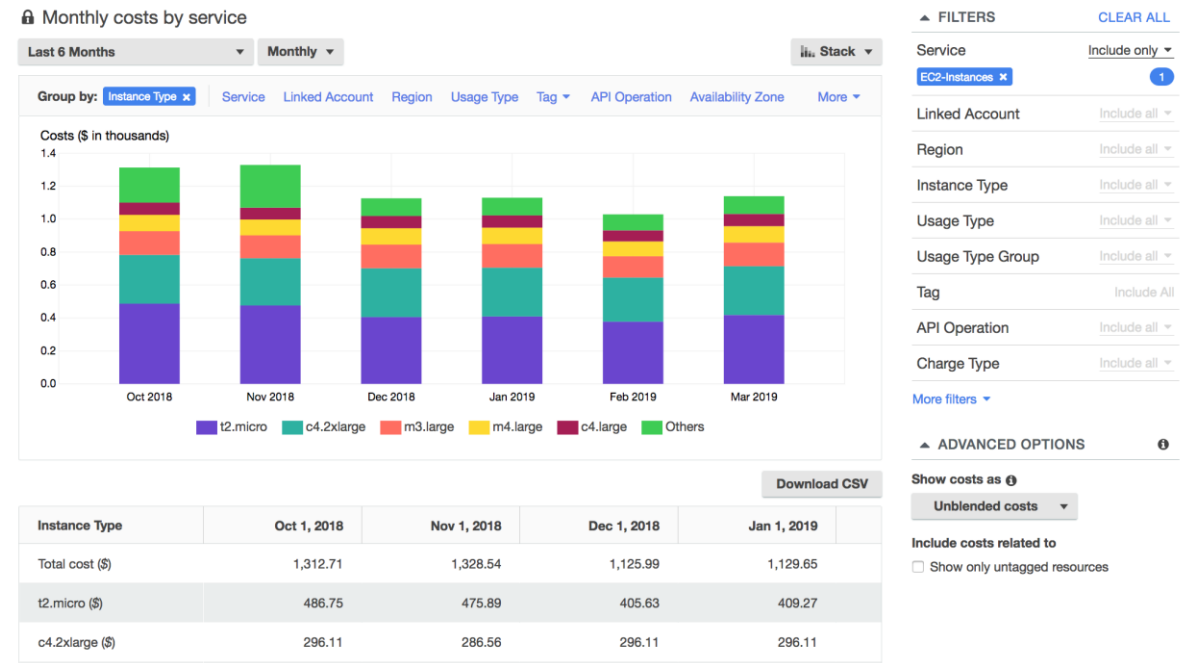
Visualize, understand, and manage your AWS costs and usage over time by creating custom reports

### Visualize

A set of default reports are included to help you quickly gain insight into your cost drivers and usage trends

### Forecast

Use forecasting to get a better idea of what your costs and usage may look like in the future based on historical usage patterns.



# AWS Savings Plans (Cost Explorer Feature)



Flexible pricing model that can provide savings of up to 72% on AWS usage

This model offers prices on Amazon EC2 instances usage, regardless of instance family, size, OS, tenancy or AWS Region, and also applies to AWS Fargate Usage. AWS Cost Explorer will help you choose a Savings Plan, and will guide you through the purchase process

## Compute

These plans automatically apply to EC2 instance usage, AWS Fargate, and AWS Lambda service usage regardless of instance family, size, AZ, region, OS, or tenancy

## EC2 & SageMaker

Provides the lowest prices, in exchange for commitment to usage of individual instance families in a selected region

Recommendation options

<b>Savings Plans type</b> <input checked="" type="radio"/> Compute <input type="radio"/> EC2 Instance	<b>Savings Plans term</b> <input type="radio"/> 1-year <input checked="" type="radio"/> 3-year	<b>Payment option</b> <input checked="" type="radio"/> All upfront <input type="radio"/> Partial upfront <input type="radio"/> No upfront	<b>Based on the past</b> <input type="radio"/> 7 days <input type="radio"/> 30 days <input checked="" type="radio"/> 60 days
-------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------

Recommendation: Purchase a Compute Savings Plan at a commitment of \$2.40/hour

You could save an estimated \$1,173 monthly by purchasing the recommended Compute Savings Plan.

Based on your past 60 days of usage, we recommend purchasing a Savings Plan with a commitment of **\$2.40/hour** for a **3-year term**. With this commitment, we project that you could save an average of **\$1.61/hour** - representing a **40%** savings compared to On-Demand. To account for variable usage patterns, this recommendation maximizes your savings by leaving an average **\$0.04/hour** of On-Demand spend.

Before recommended purchase	After recommended purchase (based on your past 60 days of usage)	
<b>Monthly On-Demand spend</b> ⓘ  <b>\$2,955</b> (\$4.05/hour) <small>Based on your On-Demand spend over the past 60 days</small>	<b>Estimated monthly spend</b> ⓘ  <b>\$1,782</b> (\$2.44/hour) <small>Your recommended \$2.40/hour Savings Plans commitment - an average \$0.04/hour of On-Demand spend</small>	<b>Estimated monthly savings</b> ⓘ  <b>\$1,173</b> (\$1.61/hour) <small>40% monthly savings over On-Demand \$2,955 - \$1,782 = \$1,173</small>

This recommendation examines your usage over the past 60 days (including your existing Savings Plans and EC2 Reserved Instances) and calculates what your costs would have been had you purchased the recommended Savings Plans. See applicable rates for Savings Plans [here](#). To generate this recommendation, AWS simulates your bill for different commitment amounts and recommends the commitment amount that provides the greatest estimated savings. [Learn more](#)

Recommended Compute Savings Plans Download CSV Add selected Savings Plan(s) to cart

×	Term	Payment option	Recommended commitment	Estimated hourly savings ⓘ
<input checked="" type="checkbox"/>	3-year	All upfront	\$2.40/hour	\$1.61 (40%)

\*Average hourly spend and minimum hourly spend based on your current on-demand spend for the given instance family.

# AWS Organizations



## Central Governance and Management Across AWS Accounts

Programmatically create new AWS accounts and allocate resources, group accounts to organize your workflows, apply policies to accounts or groups for governance, and simplify billing by using a single payment method for all of your accounts

### Automate

Automate the creation of new AWS accounts by adding them to user-defined groups in your organization for instant security policy application, touchless infrastructure deployments and auditing

### Share

Share critical central resources across your accounts such as Active Directory

AWS Organizations > AWS accounts

### AWS accounts

[Add an AWS account](#)

The accounts listed below are members of your organization. The organization's management account is responsible for paying the bills for all accounts in the organization. You can use the tools provided by AWS Organizations to centrally manage these accounts. [Learn more](#)

**Organization**  
Organizational units (OUs) enable you to group several accounts together and administer them as a single unit instead of one at a time.

Actions ▼

Hierarchy

List

Organizational structure	Account created/joined date
▼ <input type="checkbox"/> Root	
<input type="checkbox"/> [Redacted] management account	Joined 2021/08/23

# AWS Pricing Calculator (formerly TCO Calculator)



Configure a cost estimate that fits your unique business needs with AWS

Explore AWS services and create an estimate for the cost of your use cases on AWS

## Estimate

Estimate the cost to migrate your architecture setup to the cloud, or explore what an expansion of your business might look like

## Right Size

Enter your minimum requirements to identify the most cost effective EC2 Instance for your use case.

A screenshot of the AWS Pricing Calculator web application. The interface is dark-themed with a top navigation bar containing the 'aws pricing calculator' logo, a 'Feedback' link, a language dropdown set to 'English', and a 'Contact Sales' button. Below the navigation bar, a breadcrumb trail shows 'AWS Pricing Calculator > My Estimate > Add service'. The main content area is titled 'Select service' with an 'Info' link. It features a search bar labeled 'AWS services (120)' with a 'Cancel' button. Below the search bar, six service cards are displayed in a 2x3 grid. Each card includes the service name, a brief description, and two buttons: 'Product page' and 'Configure'. The services shown are Amazon API Gateway, Amazon Athena, Amazon Aurora MySQL-Compatible, Amazon Aurora PostgreSQL-Compatible DB, Amazon Braket, and Amazon Carrier IP.



# Cloud Financial Management

# Deploy Globally with Customer Focused Services

## Billing & Pricing Domain Focus Areas

- Compare and contrast the various pricing models for AWS
- Recognize the various account structures in relation to AWS billing and pricing
- Identify resources available for billing support
- Identify resources for technology support

# Cloud Financial Management

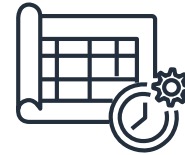
Manage, optimize, and plan AWS cost and usage



Measurement and  
accountability



Cost  
optimization



Planning and  
forecasting



Cloud financial  
operations

See

Save

Plan

Run

CFM Maturity scale

# Measurement and accountability



Capabilities that enable organizations to establish cost visibility, and accountability for spend

Activities	Outcomes
Implement an account structure and tagging dictionary	Cost and usage mapped to workloads and org structure
Establish reporting and monitoring for cost and usage	Decisions made with near real-time data and costs under budget
Allocate cloud costs	Cost-aware cloud consumption
Measure and circulate efficiency/value KPIs	Verifiable cloud investment decisions and outcomes



By tagging all instances in AWS, we are now able to look at specific costs from the application layer down to every resource associated with an application. This has allowed us to surface the hidden costs for operating applications.

**Chad Marino**  
**Executive Director of Technology Services**

# Cost Optimization



Capabilities that enable organizations to pay only for the resources they need

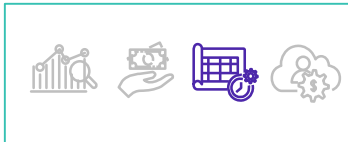
Activities	Outcomes
Architect and design for value	Unnecessary spend avoided as early as possible
Identify and eliminate cloud waste	Wasteful spend repurposed for innovation and experimentation
Choose the best purchase option	Improved unit economics
Evolve with new cloud offerings	Cloud provider innovation leveraged to reduce costs



Our old platform was built and used for 6 years on “our night” of television, and never failed. Resilience and redundancy were areas which we really needed to focus on (as we moved to serverless). If the RDS failed then we had SQS, if SQS failed then we had S3 backups. Our (old platform) monthly hosting costs were over \$83k, compared to under \$6k (for serverless). In fact, the cost of our “on the night” serverless platform was \$92.

**Caroline Rennie**  
Product Lead

# Planning and Forecasting



Capabilities that enable customers to better understand future costs associated with current and new cloud workloads

Activities	Outcomes
Budget and forecast cloud costs dynamically	Increased forecast accuracy and business predictability
Estimate cloud workload costs	Faster cost-based decisions
Quantify cloud business value	Prioritized projects based on expected value creation
Integrate cloud with IT financial management planning	Consolidated planning across entire IT estate



By using AWS, Zynga could carefully plan, test, and develop proof of concepts without needing to commit to long-term fixed IT assets. This resulted in reduced costs and lower risk as it adapted to technology demands in real time, instead of relying on forecast models.

# Cloud Financial Operations



Capabilities that enable customers to better understand future costs associated with current and new cloud workloads

Activities	Outcomes
Secure executive sponsorship for a CFM function	Programmatic approach to cost management
Align stakeholder understanding of cloud cost	Self-sustaining cost-aware culture
Implement cloud consumption guardrails	Business agility and cost governance
Evolve processes, automation and tools	Continuous cost efficiency at scale



ICONLOOP has established a Task Force Team for continuous cost management and began the cost optimization process by identifying and categorizing current resources based on tagging, user, and usage. For the classified resources, we were able to right-size our instances and reduce our EC2 spend by 5%, and apply AWS Reserved Instances for 36% additional overall cost reduction for steady-state workloads. This process has already allowed us to reduce AWS cost significantly and we keep monitoring our resources through a dashboard we built to achieve more savings.

**Jinwoo Jeong**  
Infrastructure Team Leader

# Putting it All Together



## Measurement and accountability

Implement account and tagging strategy

Report and monitor cost and usage

Allocate costs

Measure efficiency/value KPIs



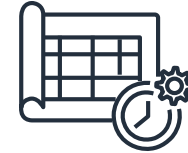
## Cost optimization

Architect and design

Eliminate cloud waste

Choose the best purchase option

Evolve with new cloud offerings



## Planning and forecasting

Dynamic budgeting and forecasting

Estimate workload costs

Quantify cloud business value

Integrate cloud with IT financial management



## Cloud financial operations

Secure sponsorship for a CFM function

Align stakeholder understanding of cost

Implement cloud guardrails

Evolve process, automation, and tools



# Thank you!

